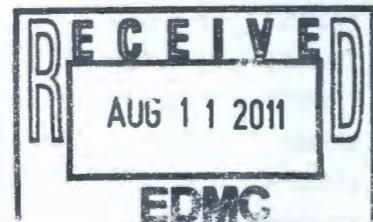


SAF-RC-148
300 Area Field Remediation –
Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21

KW 7/7/11
INITIAL/DATE



COMMENTS:

SDG J01133

SAF-RC-148

Rad only

Chem only

Rad & Chem

Complete

Partial

Sample Location/Waste Site: 300-258 Verification

Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By
TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: TARL

Data Package Contains 33 Pages

Report No.: 47179

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J01133	RC-148	J1JF93	J1F140462-1	MJ7XJ1AA	9MJ7XJ10	1165211
		J1JF93	J1F140462-1	MJ7XJ1AD	9MJ7XJ10	1165212
		J1JF94	J1F140462-2	MJ7X31AA	9MJ7X310	1165211
		J1JF94	J1F140462-2	MJ7X31AC	9MJ7X310	1165212
		J1JF95	J1F140462-3	MJ7X51AA	9MJ7X510	1165211
		J1JF95	J1F140462-3	MJ7X51AC	9MJ7X510	1165212
		J1JF96	J1F140462-4	MJ7X71AA	9MJ7X710	1165211
		J1JF96	J1F140462-4	MJ7X71AC	9MJ7X710	1165212

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

June 29, 2011

Attention: Joan Kessner

SAF Number	:	RC-148
Date SDG Closed	:	June 13, 2011
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	J01133
Data Deliverable	:	21-Day / Summary

CASE NARRATIVE

I. Introduction

On June 13, 2011 four soil samples were received at TestAmerica for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1JF93	MJ7XJ	SOIL	6/13/11
J1JF94	MJ7X3	SOIL	6/13/11
J1JF95	MJ7X5	SOIL	6/13/11
J1JF96	MJ7X7	SOIL	6/13/11

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Alpha Spectroscopy
Uranium 234, 235 and 238 by method RL-ALP-015
Gas Proportional Counting
Strontium-90 by method RL-GPC-003

Washington Closure Hanford
June 29, 2011

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Alpha Spectroscopy

Uranium 234, 235 and 238 by method RL-ALP-015:

The LCS, batch blank, samples and sample duplicate (J1JF93) results are within contractual requirements.

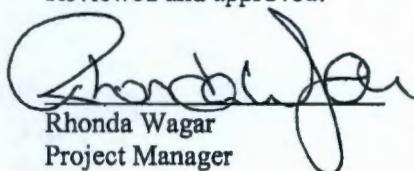
Gas Proportional Counting

Strontium-90 by method RL-GPC-003:

The LCS, batch blank, samples and sample duplicate (J1JF94) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Rhonda Wagar
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c</i> the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D)/[\sqrt{(TPUs^2 + TPUs^2)}]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUs is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 29-Jun-11

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 47179

SDG No: J01133

Batch	Client Id Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1165211 UI50_IE_PLATE_AEA									
J1JF93									
MJ7XJ1AA	U-234		2.96E-01 +/- 2.0E-01		pCi/g	78%	1.25E-01	1.00E+00	
	U-235		0.00E+00 +/- 6.0E-02	U	pCi/g	78%	1.12E-01	1.00E+00	
	U-238		2.08E-01 +/- 1.6E-01		pCi/g	78%	1.12E-01	1.00E+00	
J1JF93 DUP									
MJ7XJ1AE	U-234		3.31E-01 +/- 2.2E-01		pCi/g	68%	1.24E-01	1.00E+00	11.1
	U-235		-1.66E-03 +/- 6.6E-02	U	pCi/g	68%	1.24E-01	1.00E+00	-200.0
	U-238		3.31E-01 +/- 2.2E-01		pCi/g	68%	1.24E-01	1.00E+00	45.7
J1JF94									
MJ7X31AA	U-234		3.30E+00 +/- 9.4E-01		pCi/g	82%	1.13E-01	1.00E+00	
	U-235		1.77E-01 +/- 1.5E-01		pCi/g	82%	1.26E-01	1.00E+00	
	U-238		2.85E+00 +/- 8.4E-01		pCi/g	82%	1.13E-01	1.00E+00	
J1JF95									
MJ7X51AA	U-234		8.17E+00 +/- 1.8E+00		pCi/g	98%	8.40E-02	1.00E+00	
	U-235		3.34E-01 +/- 1.9E-01		pCi/g	98%	9.36E-02	1.00E+00	
	U-238		4.85E+00 +/- 1.2E+00		pCi/g	98%	1.07E-01	1.00E+00	
J1JF96									
MJ7X71AA	U-234		6.88E-01 +/- 3.3E-01		pCi/g	73%	1.17E-01	1.00E+00	
	U-235		2.98E-02 +/- 6.3E-02	U	pCi/g	73%	1.17E-01	1.00E+00	
	U-238		9.40E-02 +/- 1.1E-01	U	pCi/g	73%	1.17E-01	1.00E+00	
1165212 SRTOT_SEP_PRECIP_GPC									
J1JF93									
MJ7XJ1AD	STRONTIUM		1.14E-02 +/- 7.1E-02	U	pCi/g	66%	1.67E-01		
J1JF94									
MJ7X31AC	STRONTIUM		-9.75E-04 +/- 7.7E-02	U	pCi/g	57%	1.83E-01		
J1JF94 DUP									
MJ7X31AD	STRONTIUM		5.74E-02 +/- 8.3E-02	U	pCi/g	60%	1.78E-01		206.9
J1JF95									
MJ7X51AC	STRONTIUM		2.47E-02 +/- 8.2E-02	U	pCi/g	62%	1.88E-01		
J1JF96									
MJ7X71AC	STRONTIUM		-2.91E-02 +/- 7.1E-02	U	pCi/g	64%	1.77E-01		
No. of Results: 20									

TestAmerica

RPD - Relative Percent Difference.

rptSTLRchSaSum
mary2 V5.2.15
A2002

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not Identified by gamma scan software.

QC Results Summary
TestAmerica TARL
 Ordered by Method, Batch No, QC Type.,

Date: 29-Jun-11

Report No. : 47179

SDG No.: J01133

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
UISO_IE_PLATE_AEA								
1165211 BLANK QC, MJ73X1AA	U-234	1.34E-01 +- 2.0E-01	U	pCi/g	34%			2.81E-01
	U-235	-1.40E-03 +- 1.4E-01	U	pCi/g	34%			2.35E-01
	U-238	-2.80E-03 +- 1.4E-01	U	pCi/g	34%			2.55E-01
1165211 LCS, MJ73X1AC	U-234	3.94E+00 +- 1.1E+00		pCi/g	88%	118%	0.2	1.34E-01
	U-238	3.42E+00 +- 1.0E+00		pCi/g	88%	98%	0.0	1.60E-01
SRTOT_SEP_PRECIP_GPC								
1165212 BLANK QC, MJ7301AA	STRONTIUM	-8.11E-03 +- 5.6E-02	U	pCi/g	91%			1.36E-01
1165212 LCS, MJ7301AC	STRONTIUM	1.06E+00 +- 3.0E-01		pCi/g	92%	93%	-0.1	1.23E-01
No. of Results: 7								

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSum U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or
 mary V5.2.15 not identified by gamma scan software.
 A2002

FORM I
SAMPLE RESULTS

Date: 29-Jun-11

Lab Name:	TestAmerica	SDG:	J01133	Collection Date:	6/9/2011 2:18:00 PM
Lot-Sample No.:	J1F140462-1	Report No.:	47179	Received Date:	6/13/2011 11:55:00 AM
Client Sample ID:	J1JF93	COC No.:		Matrix:	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UIISO_IE_PLATE_AEA				Work Order: MJ7XJ1AA		Report DB ID: 9MJ7XJ10					
U-234	2.96E-01		1.9E-01	2.0E-01	1.25E-01	pCi/g	78%	(2.4)	6/21/11 01:33 p	1.0	g	ALP8
						2.20E-02	1.00E+00	(3.)				
U-235	0.00E+00	U	0.0E+00	6.0E-02	1.12E-01	pCi/g	78%	0.	6/21/11 01:33 p	1.0	g	ALP8
						1.56E-02	1.00E+00	0.				
U-238	2.08E-01		1.6E-01	1.6E-01	1.12E-01	pCi/g	78%	(1.9)	6/21/11 01:33 p	1.0	g	ALP8
						1.56E-02	1.00E+00	(2.5)				
Ratio U-234/238 = 1.4												
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7XJ1AD		Report DB ID: 9MJ7XJ10					
STRONTIUM	1.14E-02	U	7.1E-02	7.1E-02	1.67E-01	pCi/g	66%	0.07	6/28/11 05:04 p	6.01	g	GPC26B
						7.77E-02		0.32				

No. of Results: 4 Comments:

FORM I
SAMPLE RESULTS

Date: 29-Jun-11

Lab Name: TestAmerica
 Lot-Sample No.: J1F140462-2
 Client Sample ID: J1JF94

SDG: J01133
 Report No.: 47179
 COC No.:

Collection Date: 6/9/2011 2:27:00 PM
 Received Date: 6/13/2011 11:55:00 AM
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UISO_IE_PLATE_AEA				Work Order: MJ7X31AA		Report DB ID: 9MJ7X310					
U-234	3.30E+00		6.3E-01	9.4E-01	1.13E-01	pCi/g	82%	(29.3)	6/21/11 01:33 p	0.99	g	ALP10
						1.56E-02	1.00E+00	(7.)				
U-235	1.77E-01		1.5E-01	1.5E-01	1.26E-01	pCi/g	82%	(1.4)	6/21/11 01:33 p	0.99	g	ALP10
						2.21E-02	1.00E+00	(2.3)				
U-238	2.85E+00		5.9E-01	8.4E-01	1.13E-01	pCi/g	82%	(25.3)	6/21/11 01:33 p	0.99	g	ALP10
						1.56E-02	1.00E+00	(6.8)				
<i>Ratio U-234/238 = 1.2</i>												
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7X31AC		Report DB ID: 9MJ7X310					
STRONIUM	-9.75E-04	U	7.7E-02	7.7E-02	1.83E-01	pCi/g	57%	-0.01	6/28/11 05:04 p	6.0	g	GPC26C
						8.50E-02		-0.03				

No. of Results: 4 Comments:

FORM I
SAMPLE RESULTS

Date: 29-Jun-11

Lab Name: TestAmerica

SDG: J01133

Collection Date: 6/9/2011 2:33:00 PM

Lot-Sample No.: J1F140462-3

Report No.: 47179

Received Date: 6/13/2011 11:55:00 AM

Client Sample ID: J1JF95

COC No.:

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UISO_IE_PLATE_AEA				Work Order: MJ7X51AA		Report DB ID: 9MJ7X510					
U-234	8.17E+00		8.6E-01	1.8E+00	8.40E-02	pCi/g	98%	(97.3)	6/21/11 01:33 p		1.0	ALP11
						1.17E-02	1.00E+00	(9.)			g	
U-235	3.34E-01		1.7E-01	1.9E-01	9.36E-02	pCi/g	98%	(3.6)	6/21/11 01:33 p		1.0	ALP11
						1.65E-02	1.00E+00	(3.6)			g	
U-238	4.85E+00		6.6E-01	1.2E+00	1.07E-01	pCi/g	98%	(45.2)	6/21/11 01:33 p		1.0	ALP11
						2.33E-02	1.00E+00	(8.4)			g	
<i>Ratio U-234/238 = 1.7</i>												
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7X51AC		Report DB ID: 9MJ7X510					
STRONTIUM	2.47E-02	U	8.2E-02	8.2E-02	1.88E-01	pCi/g	62%	0.13	6/28/11 05:04 p		6.02	GPC26A
						8.81E-02		0.6			g	

No. of Results: 4 Comments:

FORM I
SAMPLE RESULTS

Date: 29-Jun-11

Lab Name: TestAmerica

SDG: J01133

Collection Date: 6/9/2011 2:18:00 PM

Lot-Sample No.: J1F140462-4

Report No.: 47179

Received Date: 6/13/2011 11:55:00 AM

Client Sample ID: J1JF96

COC No.:

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UIISO_IE_PLATE_AEA				Work Order: MJ7X71AA		Report DB ID: 9MJ7X710					
U-234	6.88E-01		2.9E-01	3.3E-01	1.17E-01	pCi/g	73%	(5.9)	6/21/11 01:33 p		1.0	ALP12
						1.63E-02	1.00E+00	(4.2)			g	
U-235	2.98E-02	U	6.3E-02	6.3E-02	1.17E-01	pCi/g	73%	0.25	6/21/11 01:33 p		1.0	ALP12
						1.63E-02	1.00E+00	0.94			g	
U-238	9.40E-02	U	1.1E-01	1.1E-01	1.17E-01	pCi/g	73%	0.8	6/21/11 01:33 p		1.0	ALP12
						1.63E-02	1.00E+00	(1.7)			g	
Ratio U-234/238 = 7.3												
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7X71AC		Report DB ID: 9MJ7X710					
STRONTIUM	-2.91E-02	U	7.1E-02	7.1E-02	1.77E-01	pCi/g	64%	-0.16	6/28/11 05:04 p		5.99	GPC27C
						8.24E-02		-0.82			g	

No. of Results: 4 Comments:

FORM II

Date: 29-Jun-11

DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J01133

Collection Date: 6/9/2011 2:18:00 PM

Lot-Sample No.: J1F140462-1

Report No.: 47179

Received Date: 6/13/2011 11:55:00 AM

Client Sample ID: J1JF93 DUP

COC No.:

Matrix: SOIL

Parameter	Result, Orig Rst	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UIISOIE_PLATE_AEA			Work Order: MJ7XJ1AE	Report DB ID: MJ7XJ1ER			Orig Sa DB ID: 9MJ7XJ10			
U-234	3.31E-01	2.1E-01	2.2E-01	1.24E-01	pCi/g	68%	(2.7)	6/21/11 01:33 p	1.0	ALP9	
	2.96E-01		RPD 11.1		1.00E+00		(3.)		g		
U-235	-1.66E-03 U	6.6E-02	6.6E-02	1.24E-01	pCi/g	68%	-0.01	6/21/11 01:33 p	1.0	ALP9	
	0.00E+00 U		RPD -200.0		1.00E+00		-0.05		g		
U-238	3.31E-01	2.1E-01	2.2E-01	1.24E-01	pCi/g	68%	(2.7)	6/21/11 01:33 p	1.0	ALP9	
	2.08E-01		RPD 45.7		1.00E+00		(3.)		g		

Ratio U-234/238 = 1.0

Alpha Spec Result Sum = 6.6E-01

12

No. of Results: 3 Comments:

TestAmerica RPD - Relative Percent Difference.

rptSTLRchDupV5.2 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

.15 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

Date: 29-Jun-11

DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J01133

Collection Date: 6/9/2011 2:27:00 PM

Lot-Sample No.: J1F140462-2

Report No.: 47179

Received Date: 6/13/2011 11:55:00 AM

Client Sample ID: J1JF94 DUP

COC No.:

Matrix: SOIL

Parameter	Result, Orig Rst	Result, Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7X31AD			Report DB ID: MJ7X31DR		Orig Sa DB ID: 9MJ7X310		
STRONTIUM	5.74E-02	U	8.1E-02	8.3E-02	1.78E-01	pCi/g		60%	0.32	6/28/11 05:04 p	6.01	GPC26D
	-9.75E-04	U		RPD 206.9				(1.4)			g	

No. of Results: 1 Comments:

FORM II
BLANK RESULTS

Date: 29-Jun-11

Lab Name: TestAmerica

SDG: J01133

Matrix: SOIL

Report No.: 47179

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1165211	UISO_IE_PLATE_AEA				Work Order: MJ73X1AA			Report DB ID: MJ73X1AB				
U-234	1.34E-01	U	2.0E-01	2.0E-01	2.81E-01	pCi/g	34%	0.48	6/21/11 01:34 p		1.0	ALP71
					4.60E-02	1.00E+00		(1.3)			g	
U-235	-1.40E-03	U	1.4E-01	1.4E-01	2.35E-01	pCi/g	34%	-0.01	6/21/11 01:34 p		1.0	ALP71
					2.30E-02	1.00E+00		-0.02			g	
U-238	-2.80E-03	U	1.4E-01	1.4E-01	2.55E-01	pCi/g	34%	-0.01	6/21/11 01:34 p		1.0	ALP71
					3.26E-02	1.00E+00		-0.04			g	
Ratio U-234/238 = -47.9												
Batch: 1165212	SRTOT_SEP_PRECIP_GPC				Work Order: MJ7301AA			Report DB ID: MJ7301AB				
14 STRONTIUM	-8.11E-03	U	5.6E-02	5.6E-02	1.36E-01	pCi/g	91%	-0.06	6/28/11 05:04 p		5.99	GPC27B
					6.35E-02			-0.29			g	

No. of Results: 4 Comments:

FORM II
LCS RESULTS

Date: 29-Jun-11

Lab Name: TestAmerica

SDG: J01133

Matrix: SOIL

Report No.: 47179

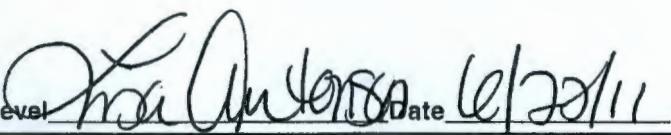
Parameter	Result Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1165211	UIISO_IE_PLATE_AEA			Work Order: MJ73X1AC			Report DB ID: MJ73X1CS					
U-234	3.94E+00	7.1E-01	1.1E+00	1.34E-01	pCi/g	88%	3.33E+00	1.0E-01	118%	6/21/11 01:34 p	0.99	ALP84
U-238	3.42E+00	6.6E-01	1.0E+00	1.60E-01	pCi/g	88%	3.48E+00	1.1E-01	98%	6/21/11 01:34 p	0.99	ALP84
Batch: 1165212	SRTOT_SEP_PRECIP_GPC			Work Order: MJ7301AC			Report DB ID: MJ7301CS					
STRONTIUM	1.06E+00	1.3E-01	3.0E-01	1.23E-01	pCi/g	92%	1.14E+00	3.1E-02	93%	6/28/11 05:04 p	6.0	GPC27A
Rec Limits: 70 130 0.2												
Rec Limits: 70 130 0.0												
Rec Limits: 70 130 -0.1												

No. of Results: 3 Comments:

Lot No., Due Date: J1F140462; 07/05/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1165211; RUISO Uiso by ALP
SDG, Matrix: J01133; SOIL

1.0 QC COC			
1.1 Is the ICOIC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2 Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4 Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2 Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4 Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5 Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0 Raw Data			
4.1 Were results calculated in the correct units?	Yes	No	N/A
4.2 Were analysis volumes entered correctly?	Yes	No	N/A
4.3 Were Yields entered correctly?	Yes	No	N/A
4.4 Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5 Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0 Other			
5.1 Are all nonconformances included and noted?	Yes	No	N/A
5.2 Are all required forms filled out?	Yes	No	N/A
5.3 Was the correct methodology used?	Yes	No	N/A
5.4 Was transcription checked?	Yes	No	N/A
5.5 Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6 Are worksheet entries complete and correct?	Yes	No	N/A
6.0 Comments on any No response:			

First Level


Kristin Anderson

Date

6/22/11

TestAmerica Richland

QAS_RADCALCV4.8.44

TestAmerica Laboratories, Inc.

Page 1

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1105211

Review Item	Yes (✓)	No (✗)	NA (✗)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result \leq the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity \leq the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			✓
1. Are all Non-conformances included and noted?			
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response:

CRDL = 1.0 pCi/g

Second Level Review:

Date: 4/22/11

Lot No., Due Date: J1F140462; 07/05/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1165212; RSRTOT SrTot by GPC
SDG, Matrix: J01133; SOIL

1.0 QC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A

4.2 Were analysis volumes entered correctly?

Yes No N/A

4.3 Were Yields entered correctly?

Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

5.2 Are all required forms filled out?

Yes No N/A

5.3 Was the correct methodology used?

Yes No N/A

5.4 Was transcription checked?

Yes No N/A

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

5.6 Are worksheet entries complete and correct?

Yes No N/A

6.0 Comments on any No response:

First Level

John Nestor Date 6-29-11

TestAmerica Richland

QAS_RADCALCV4.8.44

TestAmerica Laboratories, Inc.

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1165212

Review Item	Yes (✓)	No (✗)	NA (✗)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result \leq the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity \leq the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			✓
1. Are all Non-conformances included and noted?			
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?	✓		

Comments on any "No" response: CRDC = 1.0 pcil/g

Second Level Review:

Date: 6/20/11

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						RC-148-025	Page 1 of 1		
Collector S. Clark Q. STOWE	4/9/11	Company Contact Joan Kessner	Telephone No. 509-375-4688			Project Coordinator KESSNER, JH		Price Code 8L	Data Turnaround 21 Days		
Project Designation 300 Area Field Remediation - Soil Full Protocol		Sampling Location 300-258 Verification			SAF No. RC-148						
Ice Chest No. N/A A4 6-9-11 N/A		Field Logbook No. EL-1395-18		COA R302582000		Method of Shipment Hand Deliver/Government Vehicle 4/3 6-9-11					
Shipped To TestAmerica Incorporated, Richland		Offsite Property No. N/A				Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS Potential Radioactive < Dot limits 6/13/11 CMB		Preservation	Cool 4C	Cool 4C	Cool 4C	None	None	None			
Special Handling and/or Storage Cool + degrees C NONE A4 6-9-11		Type of Container	G/P	G/P	aG	G/P	G/P	G/P			
		No. of Container(s)	1	1	1	1	1	1			
		Volume	60mL	60mL	120mL	60mL	60mL	60g			
		See item (1) in Special Instructions.	IC Anions - 300.0; NO ₂ /NO ₃ - 333.2	PCBs - 8082	Isotopic Uranium	Strontium-89,90 - Total Sr	REMOVED Storage Safely	6/9/11			
J1F140462		SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time							RCE	
J1F93	MJ7X1	SOIL	6/9/11	1418	X	X	X	X	X	28728	
J1F94	MJ7X3	SOIL	6/9/11	1427	X	X	X	X	X	28729	
J1F95	MJ7X5	SOIL	6/9/11	1433	X	X	X	X	X	28730	
J1F96	MJ7X7	SOIL	6/9/11	1418	X	X	X	X	X	28731	
J1F97	SOIL	A4 6-9-11	6/9/11	1408	X						
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS						Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil AA=Air DS=Dust Solids DL=Dust Liquids T=Toxic WW=Wipes LL=Liquid Ve=Vegetation X=Other
Relinquished By/Removed From Quincy Stowe	Date/Time 6/9/11 1500	Received By/Stored In DAVID BECKER	Date/Time 6/9/11 1500	(1) ICP Metals - 6010TR (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Uranium, Vanadium, Zinc, Zirconium); Mercury - 1471 - (CV)							
Relinquished By/Removed From DAVID BECKER	Date/Time 6/9/11 1605	Received By/Stored In A. Frerer	Date/Time 6/9/11 1605								
Relinquished By/Removed From A. Frerer	Date/Time 6/13/11 1155	Received By/Stored In TALR	Date/Time 6/13/11 1155	Quote # 27038 SDS # J0133							
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	LOT # J1F140462							
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	Report # 7/11/11							
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	Wet 6/13/11							
LABORATORY SECTION	Received By	Title			Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time						



6/13/2011 8:26:20AM

Page 1 of 4

Analysis Report for

RCF28728

J1JF93 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE

non-reg

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF28728
Sample Description : J1JF93 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE
Sample Type : 80g pillbox

Sample Size : 6.400E+01 grams
Facility : Default

Sample Taken On : 6/9/2011 2:18:00PM
Acquisition Started : 6/13/2011 7:26:07AM

Procedure : 80 Gram Pill Box
Operator : RCT
Detector Name : GEA2703
Geometry : 80 Gram Pill Box
Live Time : 3600.0 seconds
Real Time : 3600.9 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 3.00
Peak Locate Range (in channels) : 40 - 4096
Peak Area Range (in channels) : 40 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 2/2/2011
Efficiency Calibration Used Done On : 2/23/2011
Efficiency Calibration Description : GEA2703 80gPB 020311EC SN82752-238

Sample Number : 15855

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.87E+01	3.18E+00	
TH-232d	0.424	6.29E-01	1.77E-01	



Analysis Report for RCF28729

J1JF94 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE

non-neg

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF28729
Sample Description : J1JF94 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE
Sample Type : 80g pillbox

Sample Size : 7.000E+01 grams
Facility : Default

Sample Taken On : 6/9/2011 2:27:00PM
Acquisition Started : 6/13/2011 7:26:14AM

Procedure : 80 Gram Pill Box
Operator : RCT
Detector Name : PGTLYNX
Geometry : 80 Gram Pill Box
Live Time : 3600.0 seconds
Real Time : 3601.1 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 3.00
Peak Locate Range (In channels) : 40 - 4096
Peak Area Range (In channels) : 40 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 3/3/2011
Efficiency Calibration Used Done On : 3/11/2011
Efficiency Calibration Description : PGTL 80gPB 030811EC SN82752-238

Sample Number : 15856

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.999	1.58E+01	2.75E+00	
PB-212	0.709	8.08E-01	1.35E-01	
TH-232d	0.747	3.89E-01	1.06E-01	
U-238d	0.337	9.51E-01	6.83E-01	



6/13/2011 8:26:52AM

Page 1 of 4

Analysis Report for RCF28730
J1JF95 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE

non-reg

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF28730
Sample Description : J1JF95 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE
Sample Type : 80g pillbox

Sample Size : 8.300E+01 grams
Facility : Default

Sample Taken On : 6/9/2011 2:33:00PM
Acquisition Started : 6/13/2011 7:28:21AM

Procedure : 80 Gram Pill Box
Operator : RCT
Detector Name : REGIE2
Geometry : 80 Gram Pill Box
Live Time : 3600.0 seconds
Real Time : 3601.0 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 3.00
Peak Locate Range (In channels) : 40 - 4096
Peak Area Range (In channels) : 40 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 3/11/2011
Efficiency Calibration Used Done On : 3/18/2011
Efficiency Calibration Description : REGIE2 80gPB 031511EC SN82752-238

Sample Number : 15857

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.989	1.27E+01	2.26E+00	
PB-212	0.710	6.99E-01	1.13E-01	
RA-226d	@ 0.405	4.59E-01	1.16E-01	
TH-232d	0.849	5.63E-01	1.09E-01	
U-235	0.545	2.85E-01	7.57E-02	

Analysis Report for RCF28730

J1JF95 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE

<i>Nuclide Name</i>	<i>Nuclide Id Confidence</i>	<i>Wt mean Activity (pCi/grams)</i>	<i>Wt mean Activity Uncertainty</i>	<i>Comments</i>
U-238d	0.339	3.07E+00	9.18E-01	< MDA

- ? = nuclide is part of an undetermined solution
 X = nuclide rejected by the interference analysis
 @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/13/2011 8:26:42AM
 Peak Locate From Channel : 40
 Peak Locate To Channel : 4096

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Peak Size (CPS)</i>	<i>Peak CPS (%) Uncertainty</i>	<i>Peak Type</i>	<i>Tolerance Nuclide</i>

All peaks were identified.

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\WC98582\ApexRoot\Default\Library\RCF UNKNOWN.NLB

<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>
+	K-40	1460.83 *	10.67	1.27E+01	1.88E+00
	CO-60	1173.24	99.90	-1.77E-01	1.73E-01
		1332.50	99.98	1.44E-02	1.73E-01
	NB-94	702.63	99.81	4.91E-02	1.26E-01
		871.10	99.89	3.67E-02	1.31E-01
	AG-108m	433.94	90.50	1.33E-04	9.98E-02
		614.28	89.80	-3.02E-02	1.66E-01
		722.94	90.80	-5.95E-02	1.37E-01
	CS-137	661.66	85.21	4.21E-02	1.48E-01
	EU-152	40.12	38.40	-6.84E-03	1.63E-01
		45.38	11.10	1.50E-01	5.22E-01
		121.78	28.40	4.07E-02	1.63E-01
		244.69	7.51	-3.00E-01	1.09E+00
		344.29	26.60	2.78E-02	3.14E-01
		411.12	2.23	-2.75E-02	3.94E+00



6/13/2011 9:31:19AM

Page 1 of 4

Analysis Report for RCF28731

J1JF96 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE

non-reg

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF28731
Sample Description : J1JF96 SAF:RC-148 FF2/300-285 VERIFICATION SOIL SAMPLE
Sample Type : 80g pillbox

Sample Size : 6.900E+01 grams
Facility : Default

Sample Taken On : 6/9/2011 2:18:00PM
Acquisition Started : 6/13/2011 8:31:03AM

Procedure : 80 Gram Pill Box
Operator : RCT
Detector Name : GEA2703
Geometry : 80 Gram Pill Box
Live Time : 3600.0 seconds
Real Time : 3600.9 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 3.00
Peak Locate Range (in channels) : 40 - 4096
Peak Area Range (in channels) : 40 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 2/2/2011
Efficiency Calibration Used Done On : 2/23/2011
Efficiency Calibration Description : GEA2703 80gPB 020311EC SN82752-238

Sample Number : 15860

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.47E+01	2.77E+00	
TH-232d	0.424	6.25E-01	1.66E-01	

Sample Check-in List

Date/Time Received: 6/13/11 @ 1155 GM Screen Result: (Airlock) N/A Initials [LV]
(Sample Receiving) .6 Initials [LV]

Client: WCH SDG #: J01133 NA [] SAF #: RC-148 NA []

Lot Number: JIF140462

Chain of Custody #: RC-148-025

Shipping Container ID: Hand Delivery NA []

Samples received inside shipping container/cooler/box Yes [LV] Continue with 1 through 4. Initial appropriate response.

No [] Go to 5, add comment to #16.

- | | | | |
|--|------------------|---------|-------------------------------|
| 1. Custody Seals on shipping container intact? | Yes [] | No [] | No Custody Seal [<u>LV</u>] |
| 2. Custody Seals dated and signed? | Yes [] | No [] | No Custody Seal [<u>LV</u>] |
| 3. Cooler temperature: | <u>On -10°C</u> | | NA [<u>LV</u>] |
| 4. Vermiculite/packing materials is | NA [<u>LV</u>] | Wet [] | Dry [] |

Item 5 through 16 for samples. Initial appropriate response.

- | | | |
|---|-------------------|--------|
| 5. Chain of Custody record present? | Yes [<u>LV</u>] | No [] |
| 6. Number of samples received (Each sample may contain multiple bottles): | <u>4</u> | |
| 7. Containers received: | <u>8x 60mlg</u> | |

- | | | | |
|--|--|---------|------------------|
| 8. Sample holding times exceeded? | NA [] | Yes [] | No [<u>LV</u>] |
| 9. Samples have: | <u>tape</u> hazard labels
<u>LV</u> custody seals <u>appropriate sample labels</u> | | |
| 10. Matrix: | <u>LV</u> A (FLT, Wipe, Solid, Soil) <u>I</u> (Water)
<u>LV</u> S (Air, Niosh 7400) <u>T</u> (Biological, Ni-63) | | |
| 11. Samples: | <u>LV</u> are in good condition <u>are leaking</u>
<u>LV</u> are broken <u>have air bubbles</u> (Only for samples requiring no head space)
<u>LV</u> Other _____ | | |
| 12. Sample pH appropriate for analysis requested
(If acidification is necessary, then document sample ID, initial pH, amount of HNO ₃ added and pH after addition on table overleaf) | Yes [] No [] NA [<u>LV</u>] | | |
| RPL ID # of preservative used : | | | |
| 13. Were any anomalies identified in sample receipt? | Yes [] No [<u>LV</u>] | | |
| 14. Description of anomalies (include sample numbers): NA [<u>LV</u>] | | | |

15. Sample Location, Sample Collector Listed on COC? * Yes [LV] No []
*For documentation only. No corrective action needed.

16. Additional Information:

[] Client/Courier denied temperature check.

Client/Courier unpack cooler.

Sample Custodian: Holly Date: 6/13/11

Date: 6/13 6/13/11

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is
Project Manager *Johnna Wren* Date *6/14/11*

6/16/2011 1:02:28 PM

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AnalyDueDate: 07/05/2011 Jb 1133

Sample Preparation/Analysis

Balance Id:1120373922

7S Ulso Prp PRP003/PRP005, Sep ALP009(ALP015)

SR Uranium-234,235,238 by Alpha Spec

SI CLIENT: HANFORD

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,BouslaughP

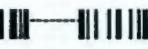
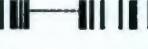
PRIORITY

Batch: 1165211 SOIL
SEQ Batch, Test: None

pCi/g

PM, Quote: RW2, 27038

TestAmerica Laboratories, Inc.

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MJ7XJ-1-AA J1F140462-1-SAMP	1.00g,in 	UITC26626 04/21/11, pd 06/15/01	50					
06/09/2011 14:18	AmtRec: 2X60MLAG	#Containers: 2					Scr:	Alpha: Beta:
2 MJ7XJ-1-AE-X J1F140462-1-DUP	1.00g,in 	UITC26627 04/21/11, pd 06/15/01						
06/09/2011 14:18	AmtRec: 2X60MLAG	#Containers: 2					Scr:	Alpha: Beta:
3 MJ7X3-1-AA J1F140462-2-SAMP	0.99g,in 	UITC26628 04/21/11, pd 06/15/01						
06/09/2011 14:27	AmtRec: 2X60MLAG	#Containers: 2					Scr:	Alpha: Beta:
4 MJ7X5-1-AA J1F140462-3-SAMP	1.00g,in 	UITC26629 04/21/11, pd 06/15/01						
06/09/2011 14:33	AmtRec: 2X60MLAG	#Containers: 2					Scr:	Alpha: Beta:
5 MJ7X7-1-AA J1F140462-4-SAMP	1.00g,in 	UITC26630 04/21/11, pd 06/15/01						
06/09/2011 14:18	AmtRec: 2X60MLAG	#Containers: 2					Scr:	Alpha: Beta:
6 MJ73X-1-AA-B J1F140000-211-BLK	1.00g,in 	UITC26631 04/21/11, pd 06/15/01						
06/14/2011 16:10 pd	AmtRec:	#Containers: 1					Scr:	Alpha: Beta:
7 MJ73X-1-AC-C J1F140000-211-LCS	0.99g,in 	UISH1365 03/17/11, pd 06/15/01						
06/14/2011 16:10 pd	AmtRec:	#Containers: 1					Scr:	Alpha: Beta:

TestAmerica
Richland Wa.Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep_SamplePrep v4.8.49

6/16/2011 1:02:29 PM

Sample Preparation/Analysis

Balance Id:1120373922

TestAmerica Laboratories, Inc.

7S Ulso Prp PRP003/PRP005, Sep ALP009(ALP015)
 SR Uranium-234,235,238 by Alpha Spec

51 CLIENT: HANFORD

PRIORITY

Pipet #: _____

AnalyDueDate: 07/05/2011

Sep1 DT/Tm Tech:

Batch: 1165211
 SEQ Batch, Test: None

pCi/g

Sep2 DT/Tm Tech:

Prep Tech: ,BouslaughP



Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
-------------------------------------	-------------------	-----------------------------	------------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments:

All Clients for Batch:
 127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. RW2, 27038

MJ73XJ1AA-SAMP Constituent List:

U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	U-234	RDL:1	pCi/g	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/g	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/g	LCL:	UCL:	RPD:

MJ73XJ1AA-BLK:

U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	U-234	RDL:1	pCi/g	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/g	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/g	LCL:	UCL:	RPD:

MJ73XJ1AC-LCS:

U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	Uranium	RDL:	pCi/g	LCL:70	UCL:130	RPD:35
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MJ73XJ1AA-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
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MJ73XJ1AA-BLK:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
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MJ73XJ1AC-LCS:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
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6/22/2011 1:21:19 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/22/2010, 6/27/2011, Batch: '1165211', User: *ALL Order By DateTImeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
1165211					
AC		Rev1C	WoodT	6/19/2011 6:54:28	
SC		wagarr	IsBatched	6/14/2011 4:11:00 PM	ICOC_RADCALC v4.8.49
SC		WoodT	Prep1C	6/19/2011 6:54:28 AM	RL-PRP-003 REVISION 1
SC		BouslaughP	Sep1C	6/20/2011 10:58:09 AM	RL-APL-004 REVISION
SC		HoganH	Sep2C	6/21/2011 10:20:57 AM	RL-ALP-015 REVISION 1
SC		BlackCL	InCnt1	6/21/2011 10:22:58 AM	RL-CI-008 REVISION 1
SC		DawkinsO	CalcC	6/21/2011 3:27:26 PM	RL-CI-008 REVISION 1
SC		antonsonl	Rev1C	6/22/2011 1:20:46 PM	RL-DR-001 Rev 2
AC		BouslaughP		6/20/2011 10:58:09	
AC		HoganH		6/21/2011 10:20:57	
AC		BlackCL		6/21/2011 10:22:58	
AC		DawkinsO		6/21/2011 3:27:26 PM	
AC		antonsonl		6/22/2011 1:20:46 PM	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.Grp Rec Cnt: 6
ICOCFractions v4.8.44

6/16/2011 12:37:00 PM

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AnalyDueDate: 07/05/2011 J01133

Sample Preparation/Analysis

Balance Id:1120373922

CH Sr-Total Prp PRP003, Sep GPC003
TH Total Strontium by GPC
SI CLIENT: HANFORD

PRIORITY

Pipet #: _____

Sep1 DT/Tm Tech: [0:50 6/28/11 APA]

Sep2 DT/Tm Tech:

Prep Tech: ,BouslaughP

Batch: 1165212 SOIL pCi/g PM, Quote: RW2, 27038
SEQ Batch, Test: None All Tests: CMTL, 1165211 7SSR, 1165212 CHTH,

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MJ7XJ-1-AD J1F140462-1-SAMP	6.01g,in	SRTA21166 05/17/11	1.5 -1.37869	1.44484 50	26B	1729	6/28/11 op			
06/09/2011 14:18	AmtRec: 2X60MLAG	#Containers: 2	✓	66.2 mg	Scr:	Alpha:	Beta:			
2 MJ7X3-1-AC J1F140462-2-SAMP	6.00g,in	SRTA21167 05/17/11	1.47279 -1.41589	26C						
06/09/2011 14:27	AmtRec: 2X60MLAG	#Containers: 2		56.9 mg	Scr:	Alpha:	Beta:			
3 MJ7X3-1-AD-X J1F140462-2-DUP	6.01g,in	SRTA21168 05/17/11	1.46299 -1.40309	26D						
06/09/2011 14:27	AmtRec: 2X60MLAG	#Containers: 2		59.9 mg	Scr:	Alpha:	Beta:			
4 MJ7X5-1-AC J1F140462-3-SAMP	6.02g,in	SRTA21169 05/17/11	1.45129 -1.38939	26A						
06/09/2011 14:33	AmtRec: 2X60MLAG	#Containers: 2		61.9 mg	Scr:	Alpha:	Beta:			
5 MJ7X7-1-AC J1F140462-4-SAMP	5.99g,in	SRTA21170 05/17/11	1.43689 -1.37339	27C						
06/09/2011 14:18	AmtRec: 2X60MLAG	#Containers: 2		63.5 mg	Scr:	Alpha:	Beta:			
6 MJ730-1-AA-B J1F140000-212-BLK	5.99g,in	SRTA21171 05/17/11	1.48219 -1.39159	27B						
06/14/2011 16:10 pd	AmtRec:	#Containers: 1		90.6 mg	Scr:	Alpha:	Beta:			
7 MJ730-1-AC-C J1F140000-212-LCS	6.00g,in	STSB1615 05/13/11	1.47999 -1.38759	27A						
06/14/2011 16:10 pd	AmtRec:	#Containers: 1		92.4 mg	Scr:	Alpha:	Beta:			

6/16/2011 12:37:01 PM

Sample Preparation/Analysis

Balance Id:1120373922

CH Sr-Total Prp PRP003, Sep GPC003

TH Total Strontium by GPC

SI CLIENT: HANFORD

PRIORITY

Pipet #: _____

AnalyDueDate: 07/05/2011

Sep1 DT/Tm Tech:

Batch: 1165212

pCi/g

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BouslaughP



TestAmerica Laboratories, Inc.

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
-------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC

Bechtel Hanford, Inc.

, RW2, 27038

MJ7XJ1AD-SAMP Constituent List:

Sr-90 RDL:1 pCi/g LCL:70 UCL:130 RPD:35

MJ7301AA-BLK:

Sr-90 RDL:1 pCi/g LCL: UCL: RPD:

MJ7301AC-LCS:

Sr-90 RDL:1 pCi/g LCL:70 UCL:130 RPD:35

MJ7XJ1AD-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MJ7301AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MJ7301AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 2

Richland Wa.

pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep_SamplePrep v4.8.49

6/29/2011 11:14:47 AM

ICOC Fraction Transfer/Status Report

ByDate: 6/29/2010, 7/4/2011, Batch: '1165212', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
1165212					
AC		Rev1C	BouslaughP	6/16/2011 12:22:23	
SC		wagarr	IsBatched	6/14/2011 4:11:00 PM	ICOC_RADCALC v4.8.49
SC		BouslaughP	InPrep	6/16/2011 12:22:23 PM	RL-PRP-003 REVISION 1
SC		WoodT	Prep1C	6/19/2011 6:54:33 AM	RL-PRP-003 REVISION 1
SC		AshworthA	Sep2C	6/28/2011 1:19:44 PM	RL-GPC-003 REVISION 1
SC		ClarkR	InCnt1	6/28/2011 1:47:16 PM	RL-CI-006 REVISION 1
SC		nortonj	Rev1C	6/29/2011 11:14:41 AM	RL-DR-001 Rev 2
AC		WoodT		6/19/2011 6:54:33	
AC		AshworthA		6/28/2011 1:19:44 PM	
AC		ClarkR		6/28/2011 1:47:16 PM	
AC		nortonj		6/29/2011 11:14:41	

AC: Accepting Entity, SC: Status Change

TestAmerica Richland
Richland Wa.

Page 1

TestAmerica Laboratories, Inc.

33

Grp Rec Cnt: 5
ICOCFractions v4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-16917-1

SDG Number: J01133

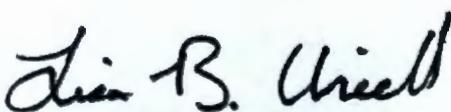
Job Description: SAF# RC-148



For:

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner



Approved for release.
Lisa B Urieil
Project Manager I
7/6/2011 11:58 AM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
07/06/2011

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002

Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com



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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-16917-1

SDG #: J01133

SAF#: RC-148

Date SDG Closed: June 14, 2011

Data Deliverable: 21 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1J4F93	280-16917-1	6010/7471/9056M/353.2/8082	6010B/7471A/9056M/353.2/8082
J1J4F94	280-16917-2	6010/7471/9056M/353.2/8082	6010B/7471A/9056M/353.2/8082
J1J4F95	280-16917-3	6010/7471/9056M/353.2/8082	6010B/7471A/9056M/353.2/8082
J1J4F96	280-16917-4	6010/7471/9056M/353.2/8082	6010B/7471A/9056M/353.2/8082
J1J4F97	280-16917-5	6010/7471/9056M/353.2/8082	6010B/7471A/9056M/353.2/8082

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.4 C.

GC SEMIVOLATILES - SW846 8082 - PCBs

The laboratory noted that sample J1JF94 contained more than one Aroclor component. Results should be considered estimated due to shared peaks.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to matrix interference and/or high constituent concentration, sample J1JF95 had to be analyzed at a dilution, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilution required.

Surrogate recoveries were not calculated for sample J1JF95, because the extract was diluted beyond the ability to reliably quantitate recoveries. The recoveries have been flagged with a "D".

The RPD between the primary and confirmation columns exceeded 25% for Aroclor 1260 and Aroclor 1254 in samples J1JF94 and J1JF95, respectively. The results have been flagged with a "P".

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-72350 indicates that physical and chemical interferences are present for Aluminum, Barium, Calcium, Chromium, Cobalt, Magnesium, Manganese, Nickel, Vanadium and Zinc. Results have been flagged with an "X".

Low levels of Aluminum and Nickel are present in the method blank associated with batch 280-72350. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

Low levels of Uranium are present in the method blank associated with batch 280-72351. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Manganese and Iron in the Matrix Spike performed on sample J1JF93; therefore, control limits are not applicable.

The duplicate analysis of sample J1JF93 exhibited RPD data outside the control limits for Cadmium, and the associated sample result has been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - MCAWW 353.2 - NITRATE+NITRITE as N

No anomalies were encountered.

GENERAL CHEMISTRY - SW846 9056M - ANIONS

No anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Lab Section	Qualifier	Description
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.
	P	This flag is used for an aroclor target analyte where there is greater than 25% difference for detected concentrations between the two GC columns
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
	C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was </= 5X the blank concentration.
General Chemistry		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography Ultrasonic Extraction	TAL DEN	SW846 8082	
	TAL DEN		SW846 3550C
Metals (ICP) Preparation, Metals	TAL DEN	SW846 6010B	
	TAL DEN		SW846 3050B
Metals (ICP/MS) Preparation, Metals	TAL DEN	SW846 6020	
	TAL DEN		SW846 3050B
Mercury (CVAA) Preparation, Mercury	TAL DEN	SW846 7471A	
	TAL DEN		SW846 7471A
Nitrogen, Nitrate-Nitrite Deionized Water Leaching Procedure	TAL DEN	MCAWW 353.2	
	TAL DEN		ASTM DI Leach
Anions, Ion Chromatography Deionized Water Leaching Procedure	TAL DEN	SW846 9056M	
	TAL DEN		ASTM DI Leach
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Method	Analyst	Analyst ID
SW846 8082	Pavlakovich, Adam M	AMP
SW846 6010B	Trudell, Lynn-Anne	LT
SW846 6020	Lill, Thomas E	TEL
SW846 7471A	Nirman, Katie M	KMN
MCAWW 353.2	Scott, Samantha J	SJS
SW846 9056M	Phan, Thu L	TLP
ASTM D-2216	Allen, Andrew J	AJA

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-16917-1	J1JF93	Solid	06/09/2011 1418	06/14/2011 0930
280-16917-2	J1JF94	Solid	06/09/2011 1427	06/14/2011 0930
280-16917-3	J1JF95	Solid	06/09/2011 1433	06/14/2011 0930
280-16917-4	J1JF96	Solid	06/09/2011 1418	06/14/2011 0930
280-16917-5	J1JF97	Solid	06/09/2011 1408	06/14/2011 0930

SAMPLE RESULTS

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF93

Lab Sample ID: 280-16917-1

Date Sampled: 06/09/2011 1418

Client Matrix: Solid

% Moisture: 3.9

Date Received: 06/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-72648	Initial Weight/Volume:	31.0 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	06/23/2011 0815			Injection Volume:	1 uL
Prep Date:	06/17/2011 2315			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		78		59 - 130	
Tetrachloro-m-xylene		76		53 - 128	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF94

Lab Sample ID: 280-16917-2

Date Sampled: 06/09/2011 1427

Client Matrix: Solid

% Moisture: 4.4

Date Received: 06/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-73735	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-72648	Initial Weight/Volume:	32.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	06/23/2011 0908			Injection Volume:	1 uL
Prep Date:	06/17/2011 2315			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.6
Aroclor 1221		7.7	U	7.7	16
Aroclor 1232		1.9	U	1.9	9.6
Aroclor 1242		4.5	U	4.5	9.6
Aroclor 1248		4.5	U	4.5	9.6
Aroclor 1254		8.6	J	2.5	9.6
Aroclor 1260		3.5	JP	2.5	9.6
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		91		59 - 130	
Tetrachloro-m-xylene		97		53 - 128	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Client Sample ID: J1JF95

Lab Sample ID: 280-16917-3

Date Sampled: 06/09/2011 1433

Client Matrix: Solid

% Moisture: 5.8

Date Received: 06/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-72648	Initial Weight/Volume:	32.7 g
Dilution:	5.0			Final Weight/Volume:	5000 uL
Analysis Date:	06/23/2011 1149			Injection Volume:	1 uL
Prep Date:	06/17/2011 2315			Result Type:	PRIMARY

Analyte	Dry Wt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		13	UD	13	49
Aroclor 1221		39	UD	39	80
Aroclor 1232		9.7	UD	9.7	49
Aroclor 1242		23	UD	23	49
Aroclor 1248		23	UD	23	49
Aroclor 1254		230	DP	13	49
Aroclor 1260		13	UD	13	49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	71	D	59 - 130
Tetrachloro-m-xylene	65	D	53 - 128

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF96

Lab Sample ID: 280-16917-4

Date Sampled: 06/09/2011 1418

Client Matrix: Solid % Moisture: 3.9

Date Received: 06/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-72648	Initial Weight/Volume:	31.7 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	06/23/2011 0929			Injection Volume:	1 uL
Prep Date:	06/17/2011 2315			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.9	U	7.9	16
Aroclor 1232		2.0	U	2.0	9.8
Aroclor 1242		4.6	U	4.6	9.8
Aroclor 1248		4.6	U	4.6	9.8
Aroclor 1254		2.6	U	2.6	9.8
Aroclor 1260		2.6	U	2.6	9.8
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		79		59 - 130	
Tetrachloro-m-xylene		77		53 - 128	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF93

Lab Sample ID: 280-16917-1

Date Sampled: 06/09/2011 1418

Client Matrix: Solid

% Moisture: 3.9

Date Received: 06/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-73689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	06/23/2011 1939			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5490	X	1.4	4.5
Antimony		0.34	U	0.34	0.54
Barium		70.8	X	0.069	0.45
Beryllium		0.10	B	0.030	0.18
Boron		0.89	U	0.89	1.8
Cadmium		0.045	B M	0.037	0.18
Calcium		6120	X	12.8	45.3
Chromium		7.5	X	0.052	0.18
Cobalt		5.5	X	0.091	0.91
Lithium		6.2		0.27	2.3
Magnesium		3810	X	3.3	18.1
Manganese		267	X	0.091	0.91
Molybdenum		0.24	U	0.24	1.8
Nickel		9.4	X	0.11	3.6
Potassium		946		37.1	272
Selenium		0.78	U	0.78	0.91
Silicon		222		5.1	9.1
Silver		0.14	U	0.14	0.18
Sodium		184		53.4	109
Vanadium		45.4	X	0.085	1.8
Zinc		31.5	X	0.36	0.91
Zirconium		14.1		0.32	2.3

Analysis Method:	6010B	Analysis Batch:	280-73956	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	06/24/2011 2155			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.7		0.60	0.91
Copper		9.2		0.20	0.91
Iron		17100		3.4	4.5
Lead		2.5		0.24	0.45

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-73711	Instrument ID:	MT_024
Prep Method:	3050B	Prep Batch:	280-72351	Lab File ID:	032AREF.D
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	06/23/2011 2105			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
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Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF93

Lab Sample ID: 280-16917-1

Client Matrix: Solid

% Moisture: 3.9

Date Sampled: 06/09/2011 1418

Date Received: 06/14/2011 0930

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.86		0.0014	0.092

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/27/2011 2149			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0052	U	0.0052	0.016

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF94

Lab Sample ID: 280-16917-2

Date Sampled: 06/09/2011 1427

Client Matrix: Solid

% Moisture: 4.4

Date Received: 06/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-73689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/23/2011 1948			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6650	X	1.4	4.5
Antimony		0.34	U	0.34	0.54
Barium		82.0	X	0.069	0.45
Beryllium		0.13	B	0.030	0.18
Boron		0.88	U	0.88	1.8
Cadmium		0.051	B	0.037	0.18
Calcium		3420	X	12.7	45.1
Chromium		9.1	X	0.052	0.18
Cobalt		6.6	X	0.090	0.90
Iron		19400		3.4	4.5
Lithium		7.4		0.27	2.3
Magnesium		3940	X	3.3	18.0
Manganese		353	X	0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		9.0	X	0.11	3.6
Potassium		1480		37.0	271
Selenium		0.78	U	0.78	0.90
Silicon		264		5.1	9.0
Silver		0.14	U	0.14	0.18
Sodium		198		53.2	108
Vanadium		49.2	X	0.085	1.8
Zinc		38.4	X	0.36	0.90
Zirconium		16.8		0.32	2.3

Analysis Method:	6010B	Analysis Batch:	280-73956	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	06/24/2011 2205			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.5		0.60	0.90
Copper		11.3		0.20	0.90
Lead		3.3		0.24	0.45

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-73711	Instrument ID:	MT_024
Prep Method:	3050B	Prep Batch:	280-72351	Lab File ID:	039SMPL.D
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	06/23/2011 2124			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
TestAmerica Denver					

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF94

Lab Sample ID: 280-16917-2

Date Sampled: 06/09/2011 1427

Client Matrix: Solid

% Moisture: 4.4

Date Received: 06/14/2011 0930

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		3.2		0.0015	0.096

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	06/27/2011 2156			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0058	U	0.0058	0.018

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF95

Lab Sample ID: 280-16917-3

Client Matrix: Solid % Moisture: 5.8 Date Sampled: 06/09/2011 1433

Date Received: 06/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-73689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Analysis Date:	06/23/2011 1951			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6980	X	1.6	5.3
Antimony		0.40	U	0.40	0.63
Barium		77.9	X	0.080	0.53
Beryllium		0.15	B	0.035	0.21
Boron		1.0	B	1.0	2.1
Cadmium		0.11	B	0.043	0.21
Calcium		4760	X	14.8	52.6
Chromium		9.6	X	0.061	0.21
Cobalt		7.5	X	0.11	1.1
Iron		22000		4.0	5.3
Lithium		6.9		0.32	2.6
Magnesium		3970	X	3.9	21.0
Manganese		325	X	0.11	1.1
Molybdenum		0.27	U	0.27	2.1
Nickel		10.4	X	0.13	4.2
Potassium		1160		43.1	315
Selenium		0.90	U	0.90	1.1
Silicon		252		6.0	10.5
Silver		0.17	U	0.17	0.21
Sodium		250		62.0	126
Vanadium		58.8	X	0.099	2.1
Zinc		53.8	X	0.42	1.1
Zirconium		22.4		0.37	2.6

Analysis Method:	6010B	Analysis Batch:	280-73956	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Analysis Date:	06/24/2011 2208			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.8		0.69	1.1
Copper		18.1		0.23	1.1
Lead		4.4		0.28	0.53

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-73711	Instrument ID:	MT_024
Prep Method:	3050B	Prep Batch:	280-72351	Lab File ID:	040SMPL.D
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	06/23/2011 2126			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
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Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF95

Lab Sample ID: 280-16917-3

Date Sampled: 06/09/2011 1433

Client Matrix: Solid

% Moisture: 5.8

Date Received: 06/14/2011 0930

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		10.1		0.0015	0.096

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	06/27/2011 2158			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.021		0.0057	0.017

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF96

Lab Sample ID: 280-16917-4

Date Sampled: 06/09/2011 1418

Client Matrix: Solid

% Moisture: 3.9

Date Received: 06/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-73689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	06/23/2011 1953			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4110	X	1.5	4.8
Antimony		0.36	U	0.36	0.57
Barium		51.2	X	0.073	0.48
Beryllium		0.085	B	0.031	0.19
Boron		0.94	U	0.94	1.9
Cadmium		0.039	U	0.039	0.19
Calcium		4450	X	13.5	47.7
Chromium		6.1	X	0.055	0.19
Cobalt		4.5	X	0.095	0.95
Iron		12600		3.6	4.8
Lithium		4.7		0.29	2.4
Magnesium		2710	X	3.5	19.1
Manganese		228	X	0.095	0.95
Molybdenum		0.25	U	0.25	1.9
Nickel		6.6	X	0.12	3.8
Potassium		690		39.1	286
Selenium		0.82	U	0.82	0.95
Silicon		166		5.4	9.5
Silver		0.15	U	0.15	0.19
Sodium		160		56.3	115
Vanadium		33.9	X	0.090	1.9
Zinc		24.3	X	0.38	0.95
Zirconium		10.6		0.34	2.4

Analysis Method:	6010B	Analysis Batch:	280-73956	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	06/24/2011 2210			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.7		0.63	0.95
Copper		9.6		0.21	0.95
Lead		2.5		0.26	0.48

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-73711	Instrument ID:	MT_024
Prep Method:	3050B	Prep Batch:	280-72351	Lab File ID:	041SMPL.D
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	06/23/2011 2129			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
TestAmerica Denver					

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Client Sample ID: J1JF96

Lab Sample ID: 280-16917-4

Date Sampled: 06/09/2011 1418

Client Matrix: Solid % Moisture: 3.9

Date Received: 06/14/2011 0930

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.72		0.0015	0.094

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	06/27/2011 2201			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0056	U	0.0056	0.017

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Client Sample ID: J1JF97

Lab Sample ID: 280-16917-5

Date Sampled: 06/09/2011 1408

Client Matrix: Solid

% Moisture: 0.0

Date Received: 06/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-73689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	06/23/2011 1955			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		185	X	1.5	4.8
Antimony		0.36	U	0.36	0.57
Barium		2.0	X	0.072	0.48
Beryllium		0.031	U	0.031	0.19
Boron		0.93	U	0.93	1.9
Cadmium		0.039	U	0.039	0.19
Calcium		41.7	B X	13.4	47.6
Chromium		0.14	B X	0.055	0.19
Cobalt		0.10	B X	0.095	0.95
Lithium		0.29	U	0.29	2.4
Magnesium		23.6	X	3.5	19.0
Manganese		6.5	X	0.095	0.95
Molybdenum		0.25	U	0.25	1.9
Nickel		0.34	B X C	0.12	3.8
Potassium		54.1	B	39.0	286
Selenium		0.82	U	0.82	0.95
Silicon		105		5.4	9.5
Silver		0.15	U	0.15	0.19
Sodium		56.2	U	56.2	114
Vanadium		0.31	B X	0.090	1.9
Zinc		1.7	X	0.38	0.95
Zirconium		0.57	B	0.34	2.4

Analysis Method:	6010B	Analysis Batch:	280-73956	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	06/24/2011 2213			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		0.63	U	0.63	0.95
Copper		0.21	U	0.21	0.95
Iron		253		3.6	4.8
Lead		0.33	B	0.26	0.48

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-73711	Instrument ID:	MT_024
Prep Method:	3050B	Prep Batch:	280-72351	Lab File ID:	042SMPL.D
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	06/23/2011 2132			Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
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Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

Client Sample ID: J1JF97

Lab Sample ID: 280-16917-5

Client Matrix: Solid % Moisture: 0.0

Date Sampled: 06/09/2011 1408
Date Received: 06/14/2011 0930**6020 Metals (ICP/MS)**

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.12		0.0014	0.087

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	06/27/2011 2207			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0052	U	0.0052	0.016

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**General Chemistry**

Client Sample ID: J1JF93

Lab Sample ID: 280-16917-1

Date Sampled: 06/09/2011 1418

Client Matrix: Solid

% Moisture: 3.9

Date Received: 06/14/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.31	U	mg/Kg	0.31	0.78	1.0	353.2
	Analysis Batch: 280-73641			Analysis Date: 06/23/2011 1527			DryWt Corrected: Y
Chloride-Soluble	20.7		mg/Kg	2.1	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Nitrate as N-Soluble	0.37	B	mg/Kg	0.33	2.6	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Bromide-Soluble	0.40	U	mg/Kg	0.40	2.1	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Nitrite as N-Soluble	0.35	U	mg/Kg	0.35	2.6	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.2	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Sulfate-Soluble	2.0	B	mg/Kg	1.8	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Fluoride-Soluble	0.86	U	mg/Kg	0.86	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2141			DryWt Corrected: Y
Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.9		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-72332			Analysis Date: 06/16/2011 1327			DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**General Chemistry**

Client Sample ID: J1JF94

Lab Sample ID: 280-16917-2

Client Matrix: Solid

% Moisture: 4.4

Date Sampled: 06/09/2011 1427

Date Received: 06/14/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.43	B	mg/Kg	0.31	0.78	1.0	353.2
	Analysis Batch: 280-73641		Analysis Date: 06/23/2011 1529				DryWt Corrected: Y
Chloride-Soluble	31.1		mg/Kg	2.1	5.2	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Nitrate as N-Soluble	0.61	B	mg/Kg	0.33	2.6	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Bromide-Soluble	0.41	U	mg/Kg	0.41	2.1	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Nitrite as N-Soluble	0.35	U	mg/Kg	0.35	2.6	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.2	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Sulfate-Soluble	2.8	B	mg/Kg	1.8	5.2	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Fluoride-Soluble	0.86	U	mg/Kg	0.86	5.2	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2305				DryWt Corrected: Y
Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.4		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-72332		Analysis Date: 06/16/2011 1327				DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**General Chemistry**

Client Sample ID: J1JF95

Lab Sample ID: 280-16917-3

Client Matrix: Solid

% Moisture: 5.8

Date Sampled: 06/09/2011 1433

Date Received: 06/14/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.32	U	mg/Kg	0.32	0.80	1.0	353.2
	Analysis Batch: 280-73641		Analysis Date: 06/23/2011 1530				DryWt Corrected: Y
Chloride-Soluble	37.4		mg/Kg	2.1	5.3	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Nitrate as N-Soluble	0.52	B	mg/Kg	0.33	2.7	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Bromide-Soluble	0.41	U	mg/Kg	0.41	2.1	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Nitrite as N-Soluble	0.36	U	mg/Kg	0.36	2.7	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.3	1.0	9056M
	Analysis Batch: 280-73196		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Sulfate-Soluble	3.3	B	mg/Kg	1.8	5.3	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Fluoride-Soluble	0.87	U	mg/Kg	0.87	5.3	1.0	9056M
	Analysis Batch: 280-73195		Analysis Date: 06/20/2011 2322				DryWt Corrected: Y
Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.8		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-72332		Analysis Date: 06/16/2011 1327				DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**General Chemistry**

Client Sample ID:	J1JF96						
Lab Sample ID:	280-16917-4					Date Sampled: 06/09/2011 1418	
Client Matrix:	Solid	% Moisture:	3.9			Date Received: 06/14/2011 0930	
Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.31	U	mg/Kg	0.31	0.78	1.0	353.2
	Analysis Batch: 280-73641			Analysis Date: 06/23/2011 1532			DryWt Corrected: Y
Chloride-Soluble	19.1		mg/Kg	2.0	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Nitrate as N-Soluble	0.33	U	mg/Kg	0.33	2.6	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Bromide-Soluble	0.40	U	mg/Kg	0.40	2.1	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Nitrite as N-Soluble	0.35	U	mg/Kg	0.35	2.6	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.2	1.0	9056M
	Analysis Batch: 280-73196			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Sulfate-Soluble	1.9	B	mg/Kg	1.8	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Fluoride-Soluble	0.86	U	mg/Kg	0.86	5.2	1.0	9056M
	Analysis Batch: 280-73195			Analysis Date: 06/20/2011 2339			DryWt Corrected: Y
Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.9		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-72332			Analysis Date: 06/16/2011 1327			DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

General Chemistry

Client Sample ID: J1JF97

Lab Sample ID: 280-16917-5

Date Sampled: 06/09/2011 1408

Client Matrix: Solid

Date Received: 06/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-72332

Analysis Date: 06/16/2011 1327

DryWt Corrected: N

QUALITY CONTROL RESULTS

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-72648					
LCS 280-72648/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-72648/1-A	Method Blank	T	Solid	3550C	
280-16917-1	J1JF93	T	Solid	3550C	
280-16917-2	J1JF94	T	Solid	3550C	
280-16917-3	J1JF95	T	Solid	3550C	
280-16917-4	J1JF96	T	Solid	3550C	
280-16917-4MS	Matrix Spike	T	Solid	3550C	
280-16917-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch: 280-73731					
LCS 280-72648/2-A	Lab Control Sample	T	Solid	8082	280-72648
MB 280-72648/1-A	Method Blank	T	Solid	8082	280-72648
280-16917-1	J1JF93	T	Solid	8082	280-72648
280-16917-2	J1JF94	T	Solid	8082	280-72648
280-16917-3	J1JF95	T	Solid	8082	280-72648
280-16917-4	J1JF96	T	Solid	8082	280-72648
280-16917-4MS	Matrix Spike	T	Solid	8082	280-72648
280-16917-4MSD	Matrix Spike Duplicate	T	Solid	8082	280-72648
Analysis Batch: 280-73735					
LCS 280-72648/2-A	Lab Control Sample	T	Solid	8082	280-72648
MB 280-72648/1-A	Method Blank	T	Solid	8082	280-72648
280-16917-1	J1JF93	T	Solid	8082	280-72648
280-16917-2	J1JF94	T	Solid	8082	280-72648
280-16917-3	J1JF95	T	Solid	8082	280-72648
280-16917-4	J1JF96	T	Solid	8082	280-72648
280-16917-4MS	Matrix Spike	T	Solid	8082	280-72648
280-16917-4MSD	Matrix Spike Duplicate	T	Solid	8082	280-72648

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-72060					
LCS 280-72060/2-A					
LCS 280-72060/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-72060/1-A	Method Blank	T	Solid	7471A	
280-16917-1	J1JF93	T	Solid	7471A	
280-16917-1DU	Duplicate	T	Solid	7471A	
280-16917-1MS	Matrix Spike	T	Solid	7471A	
280-16917-2	J1JF94	T	Solid	7471A	
280-16917-3	J1JF95	T	Solid	7471A	
280-16917-4	J1JF96	T	Solid	7471A	
280-16917-5	J1JF97	T	Solid	7471A	
Prep Batch: 280-72350					
LCS 280-72350/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-72350/1-A	Method Blank	T	Solid	3050B	
280-16917-1	J1JF93	T	Solid	3050B	
280-16917-1DU	Duplicate	T	Solid	3050B	
280-16917-1MS	Matrix Spike	T	Solid	3050B	
280-16917-2	J1JF94	T	Solid	3050B	
280-16917-3	J1JF95	T	Solid	3050B	
280-16917-4	J1JF96	T	Solid	3050B	
280-16917-5	J1JF97	T	Solid	3050B	
Prep Batch: 280-72351					
LCS 280-72351/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-72351/1-A	Method Blank	T	Solid	3050B	
280-16917-1	J1JF93	T	Solid	3050B	
280-16917-1DU	Duplicate	T	Solid	3050B	
280-16917-1MS	Matrix Spike	T	Solid	3050B	
280-16917-2	J1JF94	T	Solid	3050B	
280-16917-3	J1JF95	T	Solid	3050B	
280-16917-4	J1JF96	T	Solid	3050B	
280-16917-5	J1JF97	T	Solid	3050B	
Analysis Batch: 280-73689					
LCS 280-72350/2-A	Lab Control Sample	T	Solid	6010B	280-72350
MB 280-72350/1-A	Method Blank	T	Solid	6010B	280-72350
280-16917-1	J1JF93	T	Solid	6010B	280-72350
280-16917-1DU	Duplicate	T	Solid	6010B	280-72350
280-16917-1MS	Matrix Spike	T	Solid	6010B	280-72350
280-16917-2	J1JF94	T	Solid	6010B	280-72350
280-16917-3	J1JF95	T	Solid	6010B	280-72350
280-16917-4	J1JF96	T	Solid	6010B	280-72350
280-16917-5	J1JF97	T	Solid	6010B	280-72350

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-73711					
LCS 280-72351/2-A					
LCS 280-72351/2-A	Lab Control Sample	T	Solid	6020	280-72351
MB 280-72351/1-A	Method Blank	T	Solid	6020	280-72351
280-16917-1	J1JF93	T	Solid	6020	280-72351
280-16917-1DU	Duplicate	T	Solid	6020	280-72351
280-16917-1MS	Matrix Spike	T	Solid	6020	280-72351
280-16917-2	J1JF94	T	Solid	6020	280-72351
280-16917-3	J1JF95	T	Solid	6020	280-72351
280-16917-4	J1JF96	T	Solid	6020	280-72351
280-16917-5	J1JF97	T	Solid	6020	280-72351
Analysis Batch:280-73956					
LCS 280-72350/2-A					
LCS 280-72350/2-A	Lab Control Sample	T	Solid	6010B	280-72350
MB 280-72350/1-A	Method Blank	T	Solid	6010B	280-72350
280-16917-1	J1JF93	T	Solid	6010B	280-72350
280-16917-1DU	Duplicate	T	Solid	6010B	280-72350
280-16917-1MS	Matrix Spike	T	Solid	6010B	280-72350
280-16917-2	J1JF94	T	Solid	6010B	280-72350
280-16917-3	J1JF95	T	Solid	6010B	280-72350
280-16917-4	J1JF96	T	Solid	6010B	280-72350
280-16917-5	J1JF97	T	Solid	6010B	280-72350
Analysis Batch:280-74195					
LCS 280-72060/2-A					
LCS 280-72060/2-A	Lab Control Sample	T	Solid	7471A	280-72060
MB 280-72060/1-A	Method Blank	T	Solid	7471A	280-72060
280-16917-1	J1JF93	T	Solid	7471A	280-72060
280-16917-1DU	Duplicate	T	Solid	7471A	280-72060
280-16917-1MS	Matrix Spike	T	Solid	7471A	280-72060
280-16917-2	J1JF94	T	Solid	7471A	280-72060
280-16917-3	J1JF95	T	Solid	7471A	280-72060
280-16917-4	J1JF96	T	Solid	7471A	280-72060
280-16917-5	J1JF97	T	Solid	7471A	280-72060

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch: 280-72332					
280-16917-1	J1JF93	T	Solid	D-2216	
280-16917-1DU	Duplicate	T	Solid	D-2216	
280-16917-2	J1JF94	T	Solid	D-2216	
280-16917-3	J1JF95	T	Solid	D-2216	
280-16917-4	J1JF96	T	Solid	D-2216	
280-16917-5	J1JF97	T	Solid	D-2216	
Prep Batch: 280-72944					
LCS 280-72944/1-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-72944/2-A	Method Blank	S	Solid	DI Leach	
280-16917-1	J1JF93	S	Solid	DI Leach	
280-16917-1DU	Duplicate	S	Solid	DI Leach	
280-16917-1MS	Matrix Spike	S	Solid	DI Leach	
280-16917-2	J1JF94	S	Solid	DI Leach	
280-16917-3	J1JF95	S	Solid	DI Leach	
280-16917-4	J1JF96	S	Solid	DI Leach	
Analysis Batch: 280-73195					
LCS 280-72944/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-72944/2-A	Method Blank	S	Solid	9056M	
280-16917-1	J1JF93	S	Solid	9056M	
280-16917-1DU	Duplicate	S	Solid	9056M	
280-16917-1MS	Matrix Spike	S	Solid	9056M	
280-16917-2	J1JF94	S	Solid	9056M	
280-16917-3	J1JF95	S	Solid	9056M	
280-16917-4	J1JF96	S	Solid	9056M	
Analysis Batch: 280-73196					
LCS 280-72944/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-72944/2-A	Method Blank	S	Solid	9056M	
280-16917-1	J1JF93	S	Solid	9056M	
280-16917-1DU	Duplicate	S	Solid	9056M	
280-16917-1MS	Matrix Spike	S	Solid	9056M	
280-16917-2	J1JF94	S	Solid	9056M	
280-16917-3	J1JF95	S	Solid	9056M	
280-16917-4	J1JF96	S	Solid	9056M	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-73532					
LCS 280-73532/2-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-73532/1-A	Method Blank	S	Solid	DI Leach	
280-16917-1	J1JF93	S	Solid	DI Leach	
280-16917-2	J1JF94	S	Solid	DI Leach	
280-16917-3	J1JF95	S	Solid	DI Leach	
280-16917-4	J1JF96	S	Solid	DI Leach	
280-16917-4DU	Duplicate	S	Solid	DI Leach	
280-16917-4MS	Matrix Spike	S	Solid	DI Leach	
Analysis Batch: 280-73641					
LCS 280-73532/2-A	Lab Control Sample	S	Solid	353.2	
MB 280-73532/1-A	Method Blank	S	Solid	353.2	
280-16917-1	J1JF93	S	Solid	353.2	
280-16917-2	J1JF94	S	Solid	353.2	
280-16917-3	J1JF95	S	Solid	353.2	
280-16917-4	J1JF96	S	Solid	353.2	
280-16917-4DU	Duplicate	S	Solid	353.2	
280-16917-4MS	Matrix Spike	S	Solid	353.2	

Report Basis

S = Soluble

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Method Blank - Batch: 280-72648****Method: 8082****Preparation: 3550C**

Lab Sample ID:	MB 280-72648/1-A	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-72648	Lab File ID:	039F3901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	06/23/2011 0416	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	06/17/2011 2315			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.7
Aroclor 1221	7.8	U	7.8	16
Aroclor 1232	1.9	U	1.9	9.7
Aroclor 1242	4.5	U	4.5	9.7
Aroclor 1248	4.5	U	4.5	9.7
Aroclor 1254	2.5	U	2.5	9.7
Aroclor 1260	2.5	U	2.5	9.7

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	79	59 - 130
Tetrachloro-m-xylene	73	53 - 128

Lab Control Sample - Batch: 280-72648**Method: 8082****Preparation: 3550C**

Lab Sample ID:	LCS 280-72648/2-A	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-72648	Lab File ID:	040F4001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.1 g
Analysis Date:	06/23/2011 0753	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	06/17/2011 2315			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	31.2	22.4	72	54 - 132	
Aroclor 1260	31.2	24.6	79	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	71	59 - 130
Tetrachloro-m-xylene	71	53 - 128

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Matrix Spike/****Matrix Spike Duplicate Recovery Report - Batch: 280-72648****Method: 8082****Preparation: 3550C**

MS Lab Sample ID:	280-16917-4	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-72648	Lab File ID:	045F4501.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.1 g
Analysis Date:	06/23/2011 0951			Final Weight/Volume:	5000 uL
Prep Date:	06/17/2011 2315			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-16917-4	Analysis Batch:	280-73731	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-72648	Lab File ID:	046F4601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.7 g
Analysis Date:	06/23/2011 1012			Final Weight/Volume:	5000 uL
Prep Date:	06/17/2011 2315			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec.		RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD				
Aroclor 1016	86	85	54 - 132	4	26	
Aroclor 1260	89	89	62 - 129	2	26	
Surrogate						
	MS % Rec		MSD % Rec		Acceptance Limits	
Decachlorobiphenyl	85		87		59 - 130	
Tetrachloro-m-xylene	82		84		53 - 128	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Method Blank - Batch: 280-72350****Method: 6010B****Preparation: 3050B**

Lab Sample ID:	MB 280-72350/1-A	Analysis Batch:	280-73689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2011 1934	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	2.43	B	1.6	5.0
Antimony	0.38	U	0.38	0.60
Barium	0.076	U	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Lithium	0.30	U	0.30	2.5
Magnesium	3.7	U	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.179	B	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.0
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0
Zirconium	0.35	U	0.35	2.5

Method Blank - Batch: 280-72350**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	MB 280-72350/1-A	Analysis Batch:	280-73956	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/24/2011 2150	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	0.66	U	0.66	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50

Quality Control Results

Client: Washington Closure-Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Lab Control Sample - Batch: 280-72350**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	LCS 280-72350/2-A	Analysis Batch:	280-73689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2011 1936	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	177.3	89	82 - 116	
Antimony	50.0	46.29	93	82 - 110	
Barium	200	206.0	103	87 - 112	
Beryllium	5.00	4.80	96	84 - 114	
Boron	100	90.61	91	81 - 110	
Cadmium	10.0	10.10	101	87 - 110	
Calcium	5000	4833	97	82 - 114	
Chromium	20.0	20.11	101	84 - 114	
Cobalt	50.0	48.28	97	87 - 110	
Lithium	100	99.76	100	90 - 110	
Magnesium	5000	4978	100	90 - 110	
Manganese	50.0	53.03	106	88 - 110	
Molybdenum	100	99.37	99	86 - 110	
Nickel	50.0	49.00	98	87 - 110	
Potassium	5000	5109	102	89 - 110	
Selenium	200	203.7	102	83 - 110	
Silicon	1000	196.4	20	10 - 70	
Silver	5.00	5.51	110	87 - 114	
Sodium	5000	5234	105	90 - 112	
Vanadium	50.0	53.48	107	88 - 110	
Zinc	50.0	49.22	98	76 - 114	
Zirconium	50.0	50.61	101	90 - 110	

Lab Control Sample - Batch: 280-72350**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	LCS 280-72350/2-A	Analysis Batch:	280-73956	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/24/2011 2153	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	100	93.43	93	85 - 110	
Copper	25.0	26.41	106	88 - 110	
Iron	100	105.8	106	87 - 120	
Lead	50.0	50.03	100	86 - 110	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Matrix Spike - Batch: 280-72350**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	06/23/2011 1946	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	5490	188	7312	973	50 - 200	4
Antimony	0.34	U	24.70	53	20 - 200	
Barium	70.8	188	247.6	94	52 - 159	
Beryllium	0.10	B	4.10	85	72 - 105	
Boron	0.89	U	72.80	78	75 - 107	
Cadmium	0.045	B	8.47	90	40 - 130	
Calcium	6120	4690	11060	105	43 - 165	
Chromium	7.5	18.8	25.32	95	70 - 200	
Cobalt	5.5	46.9	45.35	85	72 - 106	
Lithium	6.2	93.8	91.51	91	84 - 109	
Magnesium	3810	4690	8221	94	64 - 145	
Manganese	267	46.9	345.7	167	40 - 200	4
Molybdenum	0.24	U	79.84	85	75 - 103	
Nickel	9.4	46.9	48.13	83	61 - 126	
Potassium	946	4690	5433	96	56 - 172	
Selenium	0.78	U	166.8	89	76 - 104	
Silicon	222	938	454.7	25	20 - 200	
Silver	0.14	U	4.53	97	75 - 141	
Sodium	184	4690	4763	98	78 - 111	
Vanadium	45.4	46.9	92.80	101	50 - 169	
Zinc	31.5	46.9	72.76	88	70 - 200	
Zirconium	14.1	46.9	60.37	99	75 - 125	

Matrix Spike - Batch: 280-72350**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73956	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	06/24/2011 2202	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2.7	93.8	82.50	85	76 - 111	
Copper	9.2	23.4	31.84	97	37 - 187	
Iron	17100	93.8	18500	1446	70 - 200	4
Lead	2.5	46.9	44.26	89	70 - 200	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Duplicate - Batch: 280-72350****Method: 6010B**
Preparation: 3050B

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25b062311.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.20 g
Analysis Date:	06/23/2011 1943	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	5490		5676	3	40	
Antimony	0.34	U	0.33	NC	40	U
Barium	70.8		54.16	27	30	
Beryllium	0.10	B	0.115	9	30	B
Boron	0.89	U	0.85	NC	30	U
Cadmium	0.045	B	0.0694	42	30	B M
Calcium	6120		5901	4	30	
Chromium	7.5		7.34	3	40	
Cobalt	5.5		5.64	3	30	
Lithium	6.2		6.43	3	30	
Magnesium	3810		3566	7	30	
Manganese	267		262.9	2	40	
Molybdenum	0.24	U	0.297	NC	30	B
Nickel	9.4		7.44	24	30	
Potassium	946		933.6	1	40	
Selenium	0.78	U	0.75	NC	30	U
Silicon	222		250.4	12	40	
Silver	0.14	U	0.185	NC	30	
Sodium	184		188.0	2	30	
Vanadium	45.4		45.73	0.7	30	
Zinc	31.5		31.83	1	40	
Zirconium	14.1		14.71	4	30	

Duplicate - Batch: 280-72350**Method: 6010B**
Preparation: 3050B

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73956	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-72350	Lab File ID:	25e062411.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.20 g
Analysis Date:	06/24/2011 2200	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	2.7		3.14	15	30	
Copper	9.2		8.90	3	30	
Iron	17100		17280	0.8	40	
Lead	2.5		3.05	20	40	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Method Blank - Batch: 280-72351**Method: 6020****Preparation: 3050B**

Lab Sample ID:	MB 280-72351/1-A	Analysis Batch:	280-73711	Instrument ID:	MT_024
Client Matrix:	Solid	Prep Batch:	280-72351	Lab File ID:	030_BLK.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2011 2059	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Uranium	0.00318	B	0.0016	0.10

Lab Control Sample - Batch: 280-72351**Method: 6020****Preparation: 3050B**

Lab Sample ID:	LCS 280-72351/2-A	Analysis Batch:	280-73711	Instrument ID:	MT_024
Client Matrix:	Solid	Prep Batch:	280-72351	Lab File ID:	031_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2011 2102	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	20.0	20.83	104	85 - 123	

Matrix Spike - Batch: 280-72351**Method: 6020****Preparation: 3050B**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73711	Instrument ID:	MT_024
Client Matrix:	Solid	Prep Batch:	280-72351	Lab File ID:	036_MS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	06/23/2011 2115	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	0.86	18.3	19.91	104	85 - 123	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Duplicate - Batch: 280-72351****Method: 6020**
Preparation: 3050B

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73711	Instrument ID:	MT_024
Client Matrix:	Solid	Prep Batch:	280-72351	Lab File ID:	035_DU.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.17 g
Analysis Date:	06/23/2011 2113	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/23/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Uranium	0.86	0.709	19	20	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Method Blank - Batch: 280-72060****Method: 7471A**
Preparation: 7471A

Lab Sample ID:	MB 280-72060/1-A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/27/2011 2144	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-72060**Method: 7471A**
Preparation: 7471A

Lab Sample ID:	LCS 280-72060/2-A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/27/2011 2147	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.407	98	87 - 111	

Matrix Spike - Batch: 280-72060**Method: 7471A**
Preparation: 7471A

Lab Sample ID:	280-16917-1	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.62 g
Analysis Date:	06/27/2011 2154	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0052	U	0.420	0.410	98	87 - 111

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Duplicate - Batch: 280-72060****Method: 7471A****Preparation: 7471A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-72060	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.65 g
Analysis Date:	06/27/2011 2151	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.0052 U	0.0053	NC	20	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Method Blank - Batch: 280-73641****Method: 353.2****Preparation: N/A**

Lab Sample ID:	MB 280-73532/1-A	Analysis Batch:	280-73641	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\062311B.R
Dilution:	1.0	Leach Batch:	280-73532	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/23/2011 1524	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/23/2011 1109				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N-Soluble	0.30	U	0.30	0.75

Method Reporting Limit Check - Batch: 280-73641**Method: 353.2****Preparation: N/A**

Lab Sample ID:	MRL 280-73641/18	Analysis Batch:	280-73641	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\062311B.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/23/2011 1353	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	0.100	0.111	111	50 - 150	

Lab Control Sample - Batch: 280-73641**Method: 353.2****Preparation: N/A**

Lab Sample ID:	LCS 280-73532/2-A	Analysis Batch:	280-73641	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\062311B.R
Dilution:	1.0	Leach Batch:	280-73532	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/23/2011 1526	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/23/2011 1109				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	50.0	48.64	97	90 - 110	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Matrix Spike - Batch: 280-73641****Method: 353.2****Preparation: N/A**

Lab Sample ID:	280-16917-4	Analysis Batch:	280-73641	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\062311B.R
Dilution:	1.0	Leach Batch:	280-73532	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/23/2011 1535	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/23/2011 1109				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	0.31	U	51.5	47.74	93	90 - 110

Duplicate - Batch: 280-73641**Method: 353.2****Preparation: N/A**

Lab Sample ID:	280-16917-4	Analysis Batch:	280-73641	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\062311B.R
Dilution:	1.0	Leach Batch:	280-73532	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/23/2011 1533	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/23/2011 1109				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual	
Nitrate Nitrite as N-Soluble	0.31	U	0.31	NC	10	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Method Blank - Batch: 280-73195****Method: 9056M****Preparation: N/A**

Lab Sample ID:	MB 280-72944/2-A	Analysis Batch:	280-73195	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	133.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2124	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Result	Qual	MDL	RL
Chloride-Soluble	2.0	U	2.0	5.0
Bromide-Soluble	0.39	U	0.39	2.0
Sulfate-Soluble	1.7	U	1.7	5.0
Fluoride-Soluble	0.82	U	0.82	5.0

Method Reporting Limit Check - Batch: 280-73195**Method: 9056M****Preparation: N/A**

Lab Sample ID:	MRL 280-73195/11	Analysis Batch:	280-73195	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 1456	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	1.00	1.03	103	50 - 150	B
Bromide-Soluble	0.200	0.201	101	50 - 150	B
Sulfate-Soluble	1.00	1.05	105	50 - 150	B
Fluoride-Soluble	0.200	0.200	100	50 - 150	B

Lab Control Sample - Batch: 280-73195**Method: 9056M****Preparation: N/A**

Lab Sample ID:	LCS 280-72944/1-A	Analysis Batch:	280-73195	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	132.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2107	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	250	251.5	101	90 - 110	
Bromide-Soluble	50.0	50.68	101	90 - 110	
Sulfate-Soluble	250	254.1	102	90 - 110	
Fluoride-Soluble	50.0	50.87	102	90 - 110	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Matrix Spike - Batch: 280-73195**Method: 9056M****Preparation: N/A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73195	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	138.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2248	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	20.7	260	279.3	99	80 - 120	
Bromide-Soluble	0.40	U	52.43	101	80 - 120	
Sulfate-Soluble	2.0	B	260.3	99	80 - 120	
Fluoride-Soluble	0.86	U	47.24	91	80 - 120	

Duplicate - Batch: 280-73195**Method: 9056M****Preparation: N/A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73195	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	135.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2157	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride-Soluble	20.7	20.84	0.7	15	
Bromide-Soluble	0.40	U	0.40	NC	15
Sulfate-Soluble	2.0	B	2.06	2	15
Fluoride-Soluble	0.86	U	0.86	NC	15

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Method Blank - Batch: 280-73196**Method: 9056M****Preparation: N/A**

Lab Sample ID:	MB 280-72944/2-A	Analysis Batch:	280-73196	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	133.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2124	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Result	Qual	MDL	RL
Nitrate as N-Soluble	0.31	U	0.31	2.5
Nitrite as N-Soluble	0.34	U	0.34	2.5
Orthophosphate as P-Soluble	1.2	U	1.2	5.0

Method Reporting Limit Check - Batch: 280-73196**Method: 9056M****Preparation: N/A**

Lab Sample ID:	MRL 280-73196/11	Analysis Batch:	280-73196	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 1456	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	0.200	0.204	102	50 - 150	B
Nitrite as N-Soluble	0.200	0.202	101	50 - 150	B
Orthophosphate as P-Soluble	0.200	0.19	71	50 - 150	U

Lab Control Sample - Batch: 280-73196**Method: 9056M****Preparation: N/A**

Lab Sample ID:	LCS 280-72944/1-A	Analysis Batch:	280-73196	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	132.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2107	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	50.0	50.50	101	90 - 110	
Nitrite as N-Soluble	50.0	51.20	102	90 - 110	
Orthophosphate as P-Soluble	50.0	49.83	100	90 - 110	

>

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1

Sdg Number: J01133

Matrix Spike - Batch: 280-73196**Method: 9056M****Preparation: N/A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73196	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	138.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2248	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	0.37	B	52.0	50.94	97	80 - 120
Nitrite as N-Soluble	0.35	U	52.0	52.95	102	80 - 120
Orthophosphate as P-Soluble	1.3	U	52.0	52.60	101	80 - 120

Duplicate - Batch: 280-73196**Method: 9056M****Preparation: N/A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-73196	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	135.TXT
Dilution:	1.0	Leach Batch:	280-72944	Initial Weight/Volume:	1.0 mL
Analysis Date:	06/20/2011 2157	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	06/20/2011 1519				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual	
Nitrate as N-Soluble	0.37	B	0.375	0	15	B
Nitrite as N-Soluble	0.35	U	0.35	NC	15	U
Orthophosphate as P-Soluble	1.3	U	1.3	NC	15	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-16917-1
Sdg Number: J01133**Duplicate - Batch: 280-72332****Method: D-2216****Preparation: N/A**

Lab Sample ID:	280-16917-1	Analysis Batch:	280-72332	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/16/2011 1327	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	3.9	4.0	1	20	

4.4-6MII FP

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						RC-148-025	Page 1 of 1
Collector S. Clark Q. STOWE	RCC 6/9/11	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH		Price Code 8L	Data Turnaround 21 Days		
Project Designation 300 Area Field Remediation - Soil Full Protocol		Sampling Location 300-258 Verification		SAF No. RC-148					
Ice Chest No. -NA 436-9-11 RCC-08-023		Field Logbook No. EL-1395-18		COA R302582000		Method of Shipment Hand Deliver/Government Vehicle, 6/6/9/11 Fed Ex			
Shipped To TestAmerica Incorporated, Richland Denver		Offsite Property No. N/A				Bill of Lading/Air Bill No. -NA- 797198242120			
POSSIBLE SAMPLE HAZARDS/REMARKS Potential Radioactive & DDT Limits At 6-13-11		Preservation		Cool 4C	Cool 4C	Cool 4C	None	None	None
Special Handling and/or Storage Cool 4 degrees C		Type of Container		G/P	G/P	aG	G/P	G/P	G/P
		No. of Container(s)		1	1	1	1	1	1
		Volume		60mL	60mL	120mL	60mL	60mL	60g
SAMPLE ANALYSIS				See item (1) in Special Instructions.	IC Anions - 300.0; NO2/NO3 - 353.2	PCBs - 8082	Isotopic Uranium 87.90 - Total Sr	REVIEWED Shipping Screen	
Sample No.	Matrix *	Sample Date	Sample Time						
J1JF93	SOIL	6/9/11	1418	X	X	X	X	X	
J1JF94	SOIL	6/9/11	1427	X	X	X	X	X	
J1JF95	SOIL	6/9/11	1433	X	X	X	X	X	
J1JF96	SOIL	6/9/11	1418	X	X	X	X	X	
J1JF97	SOIL	6/9/11	1408	X					
CHAIN OF POSSESSION				Sign/Print Names					
Relinquished By/Removed From Quincy Stowe	Date/Time 6/9/11 1500	Received By/Stored In DAVID BECKER	Date/Time 6/9/11 1500	SPECIAL INSTRUCTIONS					
Relinquished By/Removed From DAVID BECKER	Date/Time 6/9/11 1605	Received By/Stored In A. Frerer A. Frerer	Date/Time 6/9/11 1605	(1) ICP Metals - 6010TR (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Uranium, Vanadium, Zinc, Zirconium); Mercury - 7471 - (CV)					
Relinquished By/Removed From A. Frerer A. Frerer	Date/Time 6/13/11 1125	Received By/Stored In Fed Ex	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
LABORATORY SECTION	Received By _____ Title _____						Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method						Disposed By		Date/Time

546#
J01133

Matrix *

S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W=Water
O=Oil
A=Air
DS=Dress Solids
DL=Dress Liquids
T=Tissue
W=Wipe
L=Liquid
V=Vegetation
X=Other

Analytical Due:

Report Due: 7/5/11

Sample Check-in List

Date/Time Received: 6/14/11 930 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J01133 NA [] SAF #: RC-148 NA []

Job Number: 16917 Chain of Custody # RC-148-025

Shipping Container ID: RCC-08-023 Air Bill # 7971 98342120

1. Custody Seals on shipping container intact? NA [] Yes [] No []
2. Custody Seals dated and signed? NA [] Yes [] No []
3. Chain of Custody record present? NA [] Yes [] No []
4. Cooler Temperature °C: 4.4 NA [] 5. Vermiculite/packing materials is NA [] Wet [] Dry []
6. Number of samples in shipping container: 5
7. Sample holding times exceeded? NA [] Yes [] No []
8. Samples have:
 - Tape
 - Custody Seals
 - Hazard Labels
 - Appropriate Sample Labels
9. Samples are:
 - In Good Condition
 - Broken
 - Leaking
 - Have Air Bubbles(Only for samples requiring no head space.)
10. Sample pH taken? NA pH<2 [] pH>2 [] pH>9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *

*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 6/14/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager smh/TWZ Date 6/15/11

From: (509) 375-4840
Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354



J11201104290225

Ship Date: 13JUN11
ActWgt 50.0 LB
CAD: 8897843/INET3180

Delivery Address Bar Code

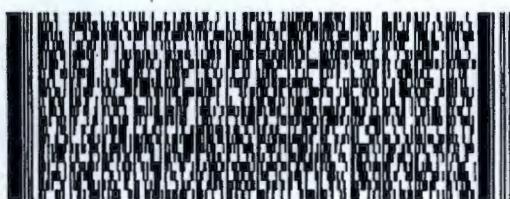


Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100
Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

BILL SENDER

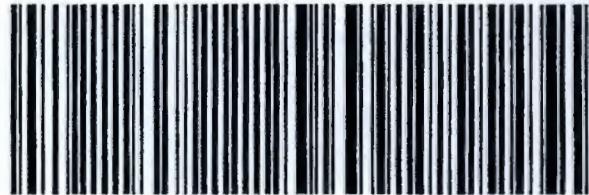


TRK# 7971 9824 2120
0201

TUE - 14 JUN A1
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA



5DFG1/OCB0/F5F4

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Login Sample Receipt Checklist

Client: Washington Closure Hanford

Job Number: 280-16917-1

SDG Number: J01133

Login Number: 16917

List Source: TestAmerica Denver

List Number: 1

Creator: Cofold, Stephen T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	